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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,081	03/08/2001	John Reagan	NBAN0005	8522
22862	7590	04/19/2005	EXAMINER	
GLENN PATENT GROUP 3475 EDISON WAY, SUITE L MENLO PARK, CA 94025			CORRIELUS, JEAN B	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/803,081

Applicant(s)

REAGAN ET AL.

Examiner

Jean B Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/18/04.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1,3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The article on "on recursive calculation of the generalized inversed matrix" by Saleem Mohideen and Vladimir Cherkassky, refers to in the specification page 7, needs to be submitted.

Drawings

2. The drawing received on 10/13/04 is not accepted. The replacement sheet deletes all the reference numbers from the drawing. The reference numbers along with the name of each element of the drawing helps to identify each of such elements of the drawing. It is suggested that the reference numbers in the original drawing be kept and that the specification should be instead be amended to make reference to any reference number used in the drawing.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 302-310, as shown in fig. 3.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the step of subtracting as recited in claims 1, 3 and 4, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description are required in reply to the Office action to avoid abandonment of the application. **Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.** The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 1 and 3-4 are objected to because of the following informalities: claim 1, lines 6-7, are the samples “ $x(n)$, $x(n-1)$, $x(n-1-N)$ and $x(n)$, $x(n+1)$, ..., $x(n+N-1)$ ” part of the received-signal samples? If so, the claim should be amended to include a limitation such as “of said received-signal samples”, in line 7, before “and” so as to be consistent

with antecedent in line 4. Claim 1, line 7, the claim recites "computing the magnitude squared". However, the claim does not state the magnitude squared of what is computed. It is of the "inner product"? If so the claim should be amended to include "of said inner product" after squared. Claim 1, line 8, parenthesis needs to be removed. In addition, the limitation recited in lines 8-9, should be rewritten in the present tense rather than the passive form. Furthermore, line 9, combining is performed on what? It is on the received signal samples? Does "the result" recited in line 11 refer to the result of the combining step? If so, the claim should be amended to include a limitation such as "combining step" after result. Line 12, from what the corresponding number of samples are subtracted? Does the corresponding number of samples correspond to the "index" determined in the assuming step? If so, line 13 should be amended as follow: "subtracting a number of samples (from said received signal samples) corresponding to the index to find a first received -signal". Line 15, "after first, "received signal" should be inserted.

As per claim 3, are the samples recited in line 7 part of the received signal samples? If so, the claim should be amended to include a limitation such as "of said series of received signal samples" before "so". The limitation "is performed" should be deleted; line 7, the quotation around "coherent" should be removed. Line 7, after $x(n+64)$, "as follow" should be inserted. Does "the result" recited in line 11 refer to the result of the manipulating step? If so, the claim should be amended to include a limitation such as "manipulating step" after result; line 13, from what the corresponding number of samples are subtracted? Does the corresponding number of samples

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correspond to the "index" determined in the assuming step? If so, line 13 should be amended as follow: "subtracting a number of samples (from said received signal samples) corresponding to the index to find a first received –signal". Line 14, "after first, "received signal" should be inserted.

As per claim 4, line 6, parenthesis needs to be deleted; in addition, the limitation in lines 6-7 need to be in the present tense rather than the passive form. Line 6, "the previous" should be "a previous". Does "the result" recited in line 10 refer to the result of the adding and collecting step? If so, the claim should be amended to include a limitation such as "adding and collecting step" after result; line 12, from what the corresponding number of samples are subtracted? Does the corresponding number of samples correspond to the "index" determined in the assuming step? If so, line 12 should be amended as follow: "subtracting a number of samples (from said received signal samples) corresponding to the index to find a first received –signal". Line 14, "after first, "received signal" should be inserted.

Allowable Subject Matter

5. Claims 1, 3, and 4 would be allowable if amended to overcome the objection sets forth above.

1. This application is in condition for allowance except for the above noted formal matters.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.


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A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-3086. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrielus
Primary Examiner
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4-16-05